



# Canon DM-100 microphone rattle noise fix

How to fix the Canon DM-100 video microphone rattle noise. For Canon Vixia / Legria cameras in the HF-series.

Written By: Bonka



## INTRODUCTION

The DM-100 is still the go-to microphone for all **Legria** / **Vixia** camcorders. This basically includes all Canon camcorders starting with "HF". The mic has a high price point of about [190\\$](#), and has a design flaw that will render it unusable after only a couple of years of use.

**Symptoms:** The microphone produces a rattling noise when the camera is being moved, basically rendering it useless for all other than stationary shots. This guide will give a quick fix to the problem for less than a dollar.



### TOOLS:

- [Tweezers - Pro/ESD/Angled](#) (1)

or small and pointy object

*To pull out front grill*

- [Sheet of foam](#) (1)
  - [Utility Scissors](#) (1)
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## Step 1 — The Mic



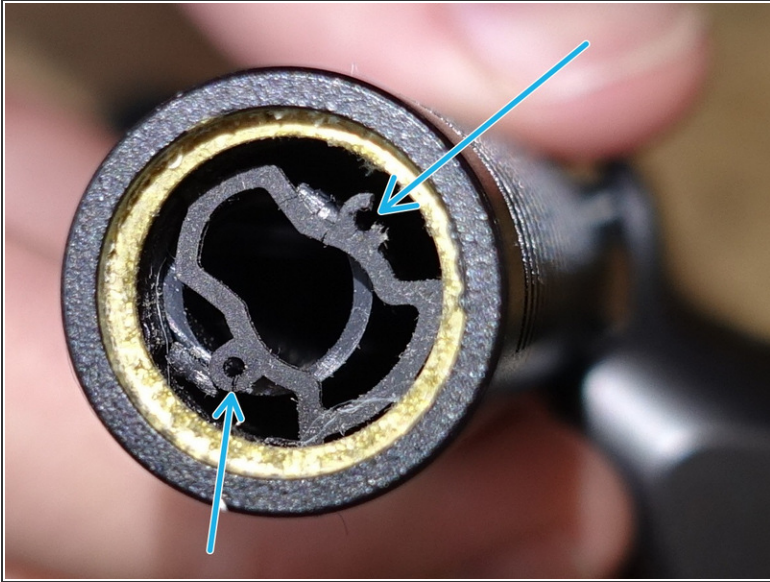
- This is the rattly beast.

## Step 2 — Getting in...



- You access the internals by removing the grill in the front, which is held in place by a small amount of adhesive.
- Use a set of tweezers (or a pointy metallic object, I used a tiny screwdriver) and gently pull in a circular fashion not to destroy the metal girder.

### Step 3 — The culprit



- Canon has used an elastic band for vibration reduction of the directional "sound pipe" (seen as a circle behind the elastic band).
- The pipe visible behind the elastic is supposed to be mounted to the inner wall with the two marked circular joints.
- These incredibly weak joints are bound to break as the rubber loses its elasticity.



## Step 4 — Remove rubber band



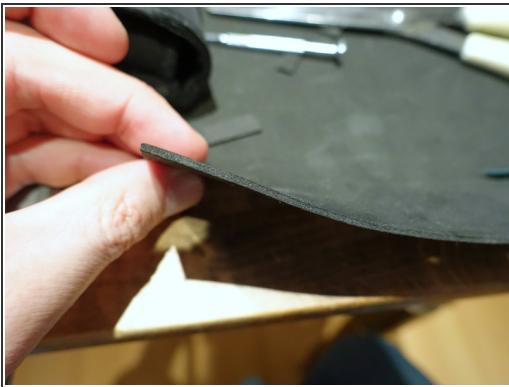
- Rubber band is irreparable and needs to go. I scratched it out using a small, sharp screwdriver.

## Step 5 — Clean slate



- The culprit of the rattling noise is now apparent. A plastic cylinder stretches through the whole of the microphone, enabling the microphones forward focused / directional sound.
- When the rubber band breaks because of the bad joints, this thing hits the inner side of the cylinder.

## Step 6 — Find stuffing



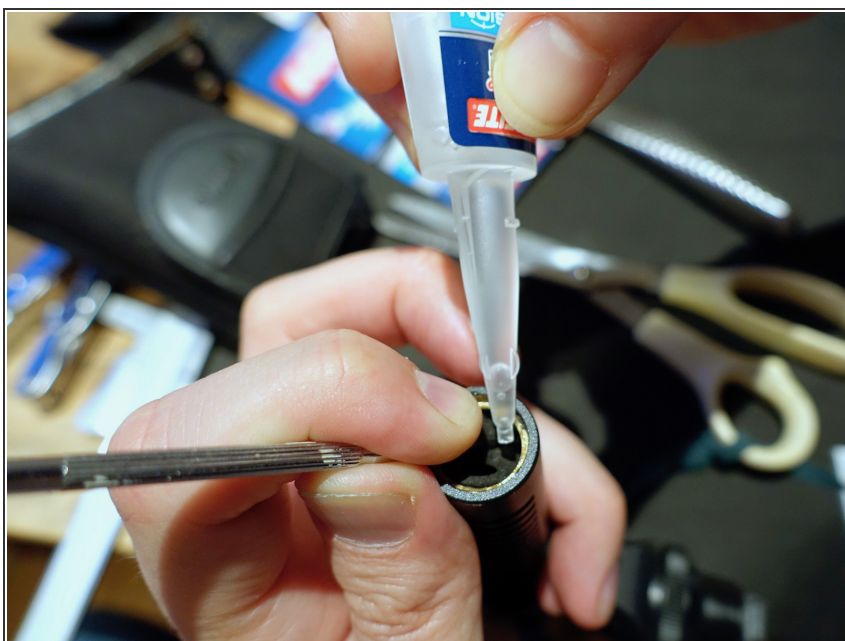
- I measured the internal diameter, and found that there in total was a void of about 2mm in between the tube and the mic cylinder.
- After some searching, I found a 2mm thick foam sheet for about 50 cents at a hobbyist shop.
- Use this to cut a small sheet of depth of about 2 cm and length matching the inner circumference.

## Step 7 — Stuff it



- After some scissoring, you should have something that looks a bit like this.

## Step 8 — Make it stick.



- Add a dab of glue around the foam to make sure it stays in place.



## Step 9 — Glue and replace the grill and wind stopper



- Add a thin layer of glue to the yellow circle and reattach the grill and windstopper.

## Step 10 — Done



- There! 190\$ microphone fixed for less than a dollar.
- The audio quality isn't affected at all.



The DM-100 is a good, but expensive microphone for all Canon camcorders. The internal suspension is broken by design, and will render the microphone unusable after 2-3 years of use.

This fix is a permanent fix to Canons poor design. Since the pipe is solid, and the foam is only reaching about 2cm into the pipe, audio quality is not affected at all.

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